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#6

SEQUENCE LISTING

<110> Carlson, Thomas J.
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Pearlstein, Richard W.
Rafalski, J. Antoni
Thorpe, Catherine J.

<120> UDP-Glucose Modifiers

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<140> 09/913,064

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<151> 2000-02-09

<150> 60/119,588

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35 40 45

Ile Asn Leu Leu Glu Val Met Ser Val His Gly Cys Lys Lys Leu Val
50 55 60

Phe Ser Ser Ser Ala Ala Val Tyr Gly Ser Pro Lys Asn Ser Pro Cys
65 70 75 80

Thr Glu Asn Phe Pro Leu Thr Pro Asn Asn Pro Tyr Gly Lys Thr Lys
85 90 95

Leu Val Val Glu Asp Ile Cys Arg Asp Ile Tyr Arg Ser Asp Pro Glu
100 105 110

Trp Lys Ile Ile Leu Leu Arg Tyr Phe Asn Pro Val Gly Ala His Pro
115 120 125

Ser Gly Tyr Leu Gly Glu Asp Pro Arg Xaa Ile Pro Asn Asn Leu Met
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 35 40 45
 Gly His Asn Ala Asn Asn Leu Asp Phe Arg Lys Gly Asp Leu Arg Asp
 50 55 60
 Lys Gln Ala Leu Xaa Gln Ile Phe Ser Ser Gln Lys Val Glu Xaa Val
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 ttgaaaagcg gttgctgaaa gcgttgcgaa accccgtcgc tattttgatt ttaatttggn 360
 tgggaccanc aacctctacg agtttatggn aaagtataat tgcaaaaaga tgggtttctc 420
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 35 40 45
 Val Arg Gln Val Val Gly Pro Leu Leu Ser Gln Asn Leu Gln Phe Thr
 50 55 60
 Gln Gly Asp Leu Arg Asn Arg Asp Asp Leu Glu Lys Leu Phe Ser Lys
 65 70 75 80
 Thr Thr Phe Asp Ala Val Ile His Phe Ala Gly Leu Lys Ala Val Ala
 85 90 95
 Glu Ser Val Ala Lys Pro Arg Arg Tyr Phe Asp Phe Asn Leu Xaa Gly
 100 105 110
 Thr Xaa Asn Leu Tyr Glu Phe Met Xaa Lys Tyr Asn Cys Lys Lys Met
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 Cys Glu Glu Asp
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 35 40 45
 Ala Leu Ser Ala Arg Leu Gln Phe Ile Phe Gly Asp Leu Thr Ile Lys
 50 55 60
 Asp Asp Leu Glu Lys Val Phe Ala Ala Lys Lys Tyr Asp Ala Val Ile
 65 70 75 80
 His Phe Ala Gly Leu Lys Ala Val Ala Glu Ser Val Ala His Pro Glu
 85 90 95
 Met Tyr Asn Arg Asn Asn Ile Val Gly Thr Val Asn Leu Tyr Asp Val
 100 105 110

Met Lys Lys His Gly Cys Asn Lys Leu Val Phe Ser Ser Ser Ala Thr
 115 120 125

Val Tyr Gly Gln Pro Glu Lys Val Pro Cys Phe Glu Asp Ser Pro Leu
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Lys Ala Leu Asn Pro Tyr Gly Arg Thr Lys Leu Tyr Trp Arg Arg Ser
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35 40 45

Ser Ser Ala Thr Val Tyr Gly Trp Pro Glu Val Ile Pro Cys Val Glu
50 55 60

Asp Ser Lys Leu Gln Ala Ala Asn Pro Tyr Gly Arg Thr Lys Leu Ile
65 70 75 80

Leu Glu Asp Met Ala Arg Asp Tyr His Arg Ala Asp Thr Glu Trp Ser
85 90 95

Ile Val Leu Leu Arg Tyr Phe Asn Pro Ile Gly Ala His Ser Ser Gly
100 105 110

Xaa Ile Xaa Arg Gly Pro Gln Gly Asp Thr Glu Gln Pro Ala Ala Leu
115 120 125

His Pro Ala Gly Xaa Arg Arg Xaa Ala Pro Arg Ala Gln Arg Leu Arg
130 135 140

Xaa Thr Ile Thr Pro Pro Gly Asp Gly Thr Ala Ile Arg Asp Tyr Ile
145 150 155 160

His Val Val Glu Leu Ala Asp Gly His Ile Ala Arg Ala Xaa Glu Leu
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Gly Arg Arg Xaa Xaa
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35 40 45

Asn Leu Xaa Ser Ala Leu Thr Lys Tyr Gly Xaa Xaa Xaa Ile Val Phe
50 55 60

Ser Ser Xaa Ala Thr Val Xaa Gly Gln Pro Xaa Lys Thr Pro Cys Val
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Glu Xaa Ser Xaa Leu Ser Ala Leu Asn Pro Tyr Gly Ala Xaa Xaa Leu
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Val Leu Glu

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Ser	Ile	Ile	Asp	Asn	Phe	Asp	Asn	Ser	Val	Met	Glu	Ala	Val	Asp	Arg	35	40	45	
Val	Arg	Gln	Val	Val	Gly	Pro	Leu	Leu	Ser	Gln	Asn	Leu	Gln	Phe	Thr	50	55	60	
Gln	Gly	Asp	Leu	Arg	Asn	Arg	Asp	Asp	Leu	Glu	Lys	Leu	Phe	Ser	Lys	65	70	75	80
Thr	Thr	Phe	Asp	Ala	Val	Ile	His	Phe	Ala	Gly	Leu	Lys	Ala	Val	Ala	85	90	95	
Glu	Ser	Val	Ala	Lys	Pro	Arg	Arg	Tyr	Phe	Asp	Phe	Asn	Leu	Val	Gly	100	105	110	
Thr	Ile	Asn	Leu	Tyr	Glu	Phe	Met	Ala	Lys	Tyr	Asn	Cys	Lys	Lys	Met	115	120	125	
Val	Phe	Ser	Ser	Ser	Ala	Thr	Val	Tyr	Gly	Gln	Pro	Glu	Lys	Ile	Pro	130	135	140	
Cys	Glu	Glu	Asp	Phe	Lys	Leu	Gln	Ala	Met	Asn	Pro	Tyr	Gly	Arg	Thr	145	150	155	160
Lys	Leu	Phe	Leu	Glu	Glu	Ile	Ala	Arg	Asp	Ile	Gln	Lys	Ala	Glu	Pro	165	170	175	
Glu	Trp	Lys	Ile	Ile	Leu	Leu	Arg	Tyr	Phe	Asn	Pro	Val	Gly	Ala	His	180	185	190	
Glu	Ser	Gly	Lys	Leu	Gly	Glu	Asp	Pro	Lys	Gly	Ile	Pro	Asn	Asn	Leu	195	200	205	
Met	Pro	Tyr	Ile	Gln	Gln	Val	Ala	Val	Gly	Arg	Leu	Thr	Glu	Leu	Asn	210	215	220	
Val	Tyr	Gly	His	Asp	Tyr	Pro	Thr	Arg	Asp	Gly	Ser	Ala	Ile	Arg	Asp	225	230	235	240
Tyr	Ile	His	Val	Met	Asp	Leu	Ala	Asp	Gly	His	Ile	Ala	Ala	Leu	Arg	245	250	255	
Lys	Leu	Phe	Thr	Thr	Glu	Asn	Ile	Gly	Cys	Thr	Ala	Tyr	Asn	Leu	Gly	260	265	270	
Thr	Gly	Arg	Gly	Thr	Ser	Val	Leu	Glu	Met	Val	Thr	Ala	Phe	Glu	Lys	275	280	285	
Ala	Ser	Gly	Lys	Lys	Ile	Pro	Val	Lys	Leu	Cys	Pro	Arg	Arg	Pro	Gly	290	295	300	
Asp	Ala	Thr	Glu	Val	Tyr	Ala	Ser	Thr	Glu	Arg	Ala	Glu	Lys	Glu	Leu				

Asp Asn Phe His Asn Ser Val Pro Glu Ala Leu Asp Arg Val Arg His
35 40 45

Ile Val Gly Pro Ala Leu Ser Ala Arg Leu Gln Phe Ile Phe Gly Asp
 50 55 60
 Leu Thr Ile Lys Asp Asp Leu Glu Lys Val Phe Ala Ala Lys Lys Tyr
 65 70 75 80
 Asp Ala Val Ile His Phe Ala Gly Leu Lys Ala Val Ala Glu Ser Val
 85 90 95
 Ala His Pro Glu Met Tyr Asn Arg Asn Asn Ile Val Gly Thr Val Asn
 100 105 110
 Leu Tyr Asp Val Met Lys Lys His Gly Cys Asn Lys Leu Val Phe Ser
 115 120 125
 Ser Ser Ala Thr Val Tyr Gly Gln Pro Glu Lys Val Pro Cys Phe Glu
 130 135 140
 Asp Ser Pro Leu Lys Ala Leu Asn Pro Tyr Gly Arg Thr Lys Leu Tyr
 145 150 155 160
 Leu Glu Glu Met Leu Arg Asp Tyr Gln His Ala Asn Pro Glu Trp Arg
 165 170 175
 Thr Ile Leu Leu Arg Tyr Phe Asn Pro Ile Gly Ala His Glu Ser Gly
 180 185 190
 Asp Ile Gly Glu Asp Pro Lys Gly Val Pro Asn Asn Leu Leu Pro Tyr
 195 200 205
 Ile Gln Gln Val Ala Val Ala Arg Arg Pro Glu Leu Asn Val Tyr Gly
 210 215 220
 His Asp Tyr Arg Thr Arg Asp Gly Thr Ala Val Arg Asp Tyr Ile His
 225 230 235 240
 Val Val Asp Leu Ala Asp Gly His Ile Ala Ala Leu Glu Lys Leu Phe
 245 250 255
 Ala Thr Pro Asp Ile Gly Cys Val Ala Tyr Asn Leu Gly Thr Gly Arg
 260 265 270
 Gly Thr Thr Val Leu Glu Met Val Ser Ala Phe Glu Lys Ala Tyr Gly
 275 280 285
 Lys Lys Ile Pro Val Lys Met Cys Pro Arg Arg Pro Gly Asp Ser Glu
 290 295 300
 Gln Val Tyr Ala Ser Thr Ala Lys Ala Glu Glu Glu Leu Gly Trp Arg
 305 310 315 320
 Ala Lys Tyr Gly Ile Glu Glu Met Cys Arg Asp Gln Trp Asn Trp Ala
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 Lys Lys Asn Pro Tyr Gly Tyr Cys Gly Asn Ala Ala Glu Asn Lys Asp
 340 345 350

<210> 17

<211> 1393

<212> DNA

<213> Zea mays

<400> 17

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gaattcccaa caatcttatg ccctatgttc agcaagttgc ggttggtagg aggccagctc 480
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<210> 18

<211> 353

<212> PRT

<213> Zea mays

<400> 18

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      20             25             30

Gly Glu Ser Val Gln Lys Pro Leu Leu Tyr Tyr Asp Asn Asn Val Ile
      35             40             45

Gly Thr Ile Asn Leu Leu Glu Val Met Ser Val His Gly Cys Lys Lys
      50             55             60

Leu Val Phe Ser Ser Ser Ala Ala Val Tyr Gly Ser Pro Lys Asn Ser
      65             70             75             80

Pro Cys Thr Glu Asn Phe Pro Leu Thr Pro Asn Asn Pro Tyr Gly Lys
      85             90             95

Thr Lys Leu Val Val Glu Asp Ile Cys Arg Asp Ile Tyr Arg Ser Asp
      100            105            110

Pro Glu Trp Lys Ile Ile Leu Leu Arg Tyr Phe Asn Pro Val Gly Ala
      115            120            125

His Pro Ser Gly Tyr Leu Gly Glu Asp Pro Arg Gly Ile Pro Asn Asn
      130            135            140

Leu Met Pro Tyr Val Gln Gln Val Ala Val Gly Arg Arg Pro Ala Leu

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145 150 155 160
 Thr Val Leu Gly Asn Asp Tyr Ala Thr Arg Asp Gly Thr Gly Val Arg
 165 170 175
 Asp Tyr Ile His Val Val Asp Leu Ala Asp Gly His Ile Ala Ala Leu
 180 185 190
 Gln Lys Leu Phe Glu Asn Ser Ser Ile Gly Cys Glu Ala Tyr Asn Leu
 195 200 205
 Gly Thr Gly Arg Gly Thr Ser Val Leu Glu Ile Val Lys Ala Phe Glu
 210 215 220
 Lys Ala Ser Gly Lys Lys Ile Pro Leu Ile Phe Gly Glu Arg Arg Pro
 225 230 235 240
 Gly Asp Ala Glu Ile Leu Phe Ser Glu Thr Thr Lys Ala Glu Arg Glu
 245 250 255
 Leu Asn Trp Lys Ala Lys Tyr Gly Ile Glu Glu Met Cys Arg Asp Gln
 260 265 270
 Trp Asn Trp Ala Ser Lys Asn Pro Tyr Gly Tyr Gly Ser Pro Asp Ser
 275 280 285
 Ile Lys Gln Asn Gly His Gln Thr Asn Gly Ser Ala Asp Ser Ser Lys
 290 295 300
 Gln Asn Gly His Arg Thr Asn Gly Ser Thr Asp Ser Pro Lys Arg Asn
 305 310 315 320
 Gly His His Ala Tyr Gly Ser Ala Asp Ser Pro Lys Arg Asn Gly His
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 Cys Val Phe Gly Ser Ser Asp Leu Lys Pro Asn Gly Asn Gly His Leu
 340 345 350

Arg

<210> 19

<211> 1498

<212> DNA

<213> *Oryza sativa*

<400> 19

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ttgcggacga	tcctggtgac	gggcggcgcc	ggctacatcg	gcagccacac	cgctctccag	180
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gccatctctc	gcgtcaggga	actcgccgga	cacaacgcca	acaacctcga	cttcgcaag	300
ggtgacctcc	gcgacaagca	agcgttggac	caaatcttct	cctctcaaag	gtttgaggct	360
gtcatccatt	ttgccgggct	gaaagctggt	ggcgagagcg	tgcagaagcc	cctgctttac	420
tacgacaaca	acctcatcgg	caccatcact	ctcctgcagg	tcattggccgc	acatggctgc	480
accaagctgg	tgttctcatc	atccgcaact	gtctacgggt	ggcccaagga	ggtgccctgc	540
actgaagaat	ccccactttg	tgcaatgaac	ccctacggca	gaacaaagct	ggtaatcgaa	600
gacatgtgcc	gggatctgca	tgccctcagac	ccaaactgga	agatcatact	gctccgatac	660
ttcaaccctg	ttggagctca	cccaagcggg	tacattgggtg	aggacccttg	cggcatccca	720
aacaacctca	tgcccttcgt	ccagcaggtc	gctgttggca	ggaggccggc	ccttaccgtc	780
tatggaaccg	actacaacac	caaggatgga	actgggggttc	gtgactatat	ccatgttggtt	840

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<210> 20

<211> 354

<212> PRT

<213> Oryza sativa

<400> 20

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Tyr Ile Gly Ser His Thr Val Leu Gln Leu Leu Gln Leu Gly Phe Arg
20 25 30

Val Val Val Leu Asp Asn Leu Asp Asn Ala Ser Glu Leu Ala Ile Leu
35 40 45

Arg Val Arg Glu Leu Ala Gly His Asn Ala Asn Asn Leu Asp Phe Arg
50 55 60

Lys Val Asp Leu Arg Asp Lys Gln Ala Leu Asp Gln Ile Phe Ser Ser
65 70 75 80

Gln Arg Phe Glu Ala Val Ile His Phe Ala Gly Leu Lys Ala Val Gly
85 90 95

Glu Ser Val Gln Lys Pro Leu Leu Tyr Tyr Asp Asn Asn Leu Ile Gly
100 105 110

Thr Ile Thr Leu Leu Gln Val Met Ala Ala His Gly Cys Thr Lys Leu
115 120 125

Val Phe Ser Ser Ser Ala Thr Val Tyr Gly Trp Pro Lys Glu Val Pro
130 135 140

Cys Thr Glu Glu Ser Pro Leu Cys Ala Met Asn Pro Tyr Gly Arg Thr
145 150 155 160

Lys Leu Val Ile Glu Asp Met Cys Arg Asp Leu His Ala Ser Asp Pro
165 170 175

Asn Trp Lys Ile Ile Leu Leu Arg Tyr Phe Asn Pro Val Gly Ala His
180 185 190

Pro Ser Gly Tyr Ile Gly Glu Asp Pro Cys Gly Ile Pro Asn Asn Leu
195 200 205

Met Pro Phe Val Gln Gln Val Ala Val Gly Arg Arg Pro Ala Leu Thr
210 215 220

Val Tyr Gly Thr Asp Tyr Asn Thr Lys Asp Gly Thr Gly Val Arg Asp

225 230 235 240
 Tyr Ile His Val Val Asp Leu Ala Asp Gly His Ile Ala Ala Leu Arg
 245 250 255
 Lys Leu Tyr Glu Asp Ser Asp Arg Ile Gly Cys Glu Val Tyr Asn Leu
 260 265 270
 Gly Thr Gly Lys Gly Thr Ser Val Leu Glu Met Val Ala Ala Phe Glu
 275 280 285
 Lys Ala Ser Gly Lys Lys Ile Pro Leu Val Phe Ala Gly Arg Arg Pro
 290 295 300
 Gly Asp Ala Glu Ile Val Tyr Ala Gln Thr Ala Lys Ala Glu Lys Glu
 305 310 315 320
 Leu Lys Trp Lys Ala Lys Tyr Gly Val Glu Glu Met Cys Arg Asp Leu
 325 330 335
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Ser Asn

<210> 21
 <211> 1532
 <212> DNA
 <213> Glycine max

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 tccccctact ttcgctcacc acttaagatt tccaacaacc cctctctgca aaacgcttcg 180
 cataagggtac ttatgcgcga taagactgta ctggtaaccg gcggagccgg ttacatcggc 240
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 gaaaattcct ccgaggttgc catccacaga gtcagggagc tcgccggcga atttggaac 360
 aacctctcct ttcacaagggt ggacctacgg gacagagctg ctctagacca aatattttct 420
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 gatcctcgtg gaattccaaa caatctcatg ccatttggtc agcaagtagc agttggccga 840
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 aaaagctttt ctttcttttag tgatcttaag gtgacaaagt acttgattta ttactattca 1380
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<210> 22
 <211> 349

<212> PRT

<213> Glycine max

<400> 22

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Ser His Thr Val Leu Gln Leu Leu Leu Gly Gly Phe Arg Ala Val Val
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Leu Asp Asn Leu Glu Asn Ser Ser Glu Val Ala Ile His Arg Val Arg
          35             40             45

Glu Leu Ala Gly Glu Phe Gly Asn Asn Leu Ser Phe His Lys Val Asp
          50             55             60

Leu Arg Asp Arg Ala Ala Leu Asp Gln Ile Phe Ser Ser Thr Gln Phe
          65             70             75             80

Asp Ala Val Ile His Phe Ala Gly Leu Lys Ala Val Gly Glu Ser Val
          85             90             95

Gln Lys Pro Leu Leu Tyr Tyr Asn Asn Asn Leu Thr Gly Thr Ile Thr
          100             105             110

Leu Leu Glu Val Met Ala Ala His Gly Cys Lys Lys Leu Val Phe Ser
          115             120             125

Ser Ser Ala Thr Val Tyr Gly Trp Pro Lys Glu Val Pro Cys Thr Glu
          130             135             140

Glu Phe Pro Leu Ser Ala Met Asn Pro Tyr Gly Arg Thr Lys Leu Ile
          145             150             155             160

Ile Glu Glu Ile Cys Arg Asp Val His Cys Ala Glu Pro Asp Cys Lys
          165             170             175

Ile Ile Leu Leu Arg Tyr Phe Asn Pro Val Gly Ala His Pro Ser Gly
          180             185             190

Tyr Ile Gly Glu Asp Pro Arg Gly Ile Pro Asn Asn Leu Met Pro Phe
          195             200             205

Val Gln Gln Val Ala Val Gly Arg Arg Pro Ala Leu Thr Val Phe Gly
          210             215             220

Asn Asp Tyr Asn Thr Ser Asp Gly Thr Gly Val Arg Asp Tyr Ile His
          225             230             235             240

Val Val Asp Leu Ala Asp Gly His Ile Ala Ala Leu Leu Lys Leu Asp
          245             250             255

Glu Pro Asn Ile Gly Cys Glu Val Tyr Asn Leu Gly Thr Gly Lys Gly
          260             265             270

Thr Ser Val Leu Glu Met Val Arg Ala Phe Glu Met Ala Ser Gly Lys
          275             280             285

Lys Ile Pro Leu Val Met Ala Gly Arg Arg Pro Gly Asp Ala Glu Ile
          290             295             300

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Val Tyr Ala Ser Thr Lys Lys Ala Glu Arg Glu Leu Lys Trp Lys Ala
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Lys Tyr Gly Ile Asp Glu Met Cys Arg Asp Gln Trp Asn Trp Ala Ser
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Lys Asn Pro Tyr Gly Tyr Gly Asp Gln Gly Ser Thr Asp
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 <211> 490
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 <213> Triticum aestivum

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 cgacaactcg ccaacgcccc gcaaaanagc ctgcacttcc gcaagggtga ccttcgtgac 240
 aaggangcgc tcgaccaaact cttctcctcc caaaggatc ttcnactttt ttccgcaaaa 300
 aagaagtatc ttttttcgng cttattatta anaattaact atagtatatt attgagtcca 360
 caaattaaat gttgattnnt ccgtccgtcc cggccgctcg gccagccanc canccgtntc 420
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<210> 24
 <211> 103
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 <213> Triticum aestivum

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 Glu Glu Ala Ile Arg Arg Val Arg Gln Leu Ala Asn Ala Pro Gln Xaa
 35 40 45
 Ser Leu Asp Phe Arg Lys Val Asp Leu Arg Asp Lys Xaa Ala Leu Asp
 50 55 60
 Gln Ile Phe Ser Ser Gln Arg Tyr Leu Xaa Leu Phe Ser Ala Lys Lys
 65 70 75 80
 Lys Tyr Leu Phe Ser Xaa Leu Leu Leu Xaa Ile Asn Tyr Ser Ile Leu
 85 90 95
 Leu Ser Pro Gln Ile Lys Cys
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<210> 25
 <211> 350
 <212> PRT
 <213> Pisum sativum

<400> 25
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 35 40 45
 Val Arg Glu Val Val Gly Ser Asn Leu Ser Gln Asn Leu Glu Phe Thr
 50 55 60
 Leu Gly Asp Leu Arg Asn Lys Asp Asp Leu Glu Lys Leu Phe Ser Lys
 65 70 75 80
 Ser Lys Phe Asp Ala Val Ile His Phe Ala Gly Leu Lys Ala Val Gly
 85 90 95
 Glu Ser Val Glu Asn Pro Arg Arg Tyr Phe Asp Asn Asn Leu Val Gly
 100 105 110
 Thr Ile Asn Leu Tyr Glu Val Met Ala Lys His Asn Cys Lys Lys Met
 115 120 125
 Val Phe Ser Ser Ser Ala Thr Val Tyr Gly Gln Pro Glu Lys Ile Pro
 130 135 140
 Cys Val Glu Asp Phe Lys Leu Gln Ala Met Asn Pro Tyr Gly Arg Thr
 145 150 155 160
 Lys Leu Phe Leu Glu Glu Ile Ala Arg Asp Ile Gln Lys Ala Glu Pro
 165 170 175
 Glu Trp Arg Ile Val Leu Leu Arg Tyr Phe Asn Pro Val Gly Ala His
 180 185 190
 Glu Ser Gly Lys Leu Gly Glu Asp Pro Arg Gly Ile Pro Asn Asn Leu
 195 200 205
 Met Pro Tyr Ile Gln Gln Val Ala Val Gly Arg Leu Pro Glu Leu Asn
 210 215 220
 Val Tyr Gly His Asp Tyr Pro Thr Arg Asp Gly Ser Ala Ile Arg Asp
 225 230 235 240
 Tyr Ile His Val Met Asp Leu Ala Asp Gly His Ile Ala Ala Leu Arg
 245 250 255
 Lys Leu Phe Thr Ser Glu Asn Ile Gly Cys Thr Ala Tyr Asn Leu Gly
 260 265 270
 Thr Gly Arg Gly Ser Ser Val Leu Glu Met Val Ala Ala Phe Glu Lys
 275 280 285
 Ala Ser Gly Lys Lys Ile Ala Leu Lys Leu Cys Pro Arg Arg Pro Gly
 290 295 300
 Asp Ala Thr Glu Val Tyr Ala Ser Thr Ala Lys Ala Glu Lys Glu Leu
 305 310 315 320
 Gly Trp Lys Ala Lys Tyr Gly Val Glu Glu Met Cys Arg Asp Gln Trp
 325 330 335
 Asn Trp Ala Lys Asn Asn Pro Trp Gly Tyr Ser Gly Lys Pro
 340 345 350

<210> 26
 <211> 350
 <212> PRT
 <213> *Cyamopsis tetragonoloba*

<400> 26

Met	Ser	Ser	Gln	Thr	Val	Leu	Val	Thr	Gly	Gly	Ala	Gly	Tyr	Ile	Gly	1	5	10	15
Ser	His	Thr	Val	Leu	Gln	Leu	Leu	Leu	Gly	Gly	Phe	Lys	Ala	Val	Val	20	25	30	
Val	Asp	Asn	Leu	Asp	Asn	Ser	Ser	Glu	Thr	Ala	Ile	His	Arg	Val	Lys	35	40	45	
Glu	Leu	Ala	Gly	Lys	Phe	Ala	Gly	Asn	Leu	Ser	Phe	His	Lys	Leu	Asp	50	55	60	
Leu	Arg	Asp	Arg	Asp	Ala	Leu	Glu	Lys	Ile	Phe	Ser	Ser	Thr	Lys	Phe	65	70	75	80
Asp	Ser	Val	Ile	His	Phe	Ala	Gly	Leu	Lys	Ala	Val	Gly	Glu	Ser	Val	85	90	95	
Gln	Lys	Pro	Leu	Leu	Tyr	Tyr	Asp	Asn	Asn	Leu	Ile	Gly	Thr	Ile	Val	100	105	110	
Leu	Phe	Glu	Val	Met	Ala	Ala	His	Gly	Cys	Lys	Lys	Leu	Val	Phe	Ser	115	120	125	
Ser	Ser	Ala	Thr	Val	Tyr	Gly	Leu	Pro	Lys	Glu	Val	Pro	Cys	Thr	Glu	130	135	140	
Glu	Phe	Pro	Leu	Ser	Ala	Ala	Asn	Pro	Tyr	Gly	Arg	Thr	Lys	Leu	Ile	145	150	155	160
Ile	Glu	Glu	Ile	Cys	Arg	Asp	Ile	Tyr	Arg	Ala	Glu	Gln	Glu	Trp	Lys	165	170	175	
Ile	Ile	Leu	Leu	Arg	Tyr	Phe	Asn	Pro	Val	Gly	Ala	His	Pro	Ser	Gly	180	185	190	
Tyr	Ile	Gly	Glu	Asp	Pro	Arg	Gly	Ile	Pro	Asn	Asn	Leu	Met	Pro	Phe	195	200	205	
Val	Gln	Gln	Val	Ala	Val	Gly	Arg	Arg	Pro	Ala	Leu	Thr	Val	Phe	Gly	210	215	220	
Asn	Asp	Tyr	Thr	Thr	Ser	Asp	Gly	Thr	Gly	Val	Arg	Asp	Tyr	Ile	His	225	230	235	240
Val	Val	Asp	Leu	Ala	Asp	Gly	His	Ile	Ala	Ala	Leu	Arg	Lys	Leu	Asn	245	250	255	
Asp	Pro	Lys	Ile	Gly	Cys	Glu	Val	Tyr	Asn	Leu	Gly	Thr	Gly	Lys	Gly	260	265	270	
Thr	Ser	Val	Leu	Glu	Met	Val	Lys	Ala	Phe	Glu	Gln	Ala	Ser	Gly	Lys	275	280	285	
Lys	Ile	Pro	Leu	Val	Met	Ala	Gly	Arg	Arg	Pro	Gly	Asp	Ala	Glu	Val				

290

295

300

Val Tyr Ala Ser Thr Asn Lys Ala Glu Arg Glu Leu Asn Trp Lys Ala
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Lys Tyr Gly Ile Asp Glu Met Cys Arg Asp Gln Trp Asn Trp Ala Ser
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